

ABSTRACT

A coding scheme for microcarriers suitable for use in distributed arrays includes labeling the carriers with quenched signaling hairpin molecules with any one of three to eight distinguishable fluorophores wherein the hairpins are of at least two types, most preferably three types, that open and fluoresce differentially as a chemical or physical condition, for example temperature, is changed. Mixtures of microcarriers having immobilized capture probes can be decoded by measuring fluorescence from said fluorophores under conditions under which only one type of hairpin is open, under which two types of hairpin are open, and so on. Mixtures of coded microcarriers with capture probes are used in assays for nucleic acids utilizing microarray methods.

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